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EXAMINER	
AJIBADE AKONAI, OLUMIDE	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/628,660	RAGHAVAN ET AL.	
	Examiner	Art Unit	
	OLUMIDE T. AJIBADE AKONAI	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 June 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22,24 and 25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22,24 and 25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed June 25, 2010 with respect to claims 1-5, 8-12, 15, 20-22, 24 and 25 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed June 25, 2010, with respect to claim 17 have been fully considered but they are not persuasive. Regarding claim 17, the applicants' representative asserts that Scheinert fails to disclose facilitating communication between a base station and a controller over an undedicated public network because a connection that facilitates communication over a dedicated line cannot be read as a connection over an undedicated public network. The examiner respectfully disagrees with the applicants' representative. Claim 17 does not recite communication between a base station and a controller "over a dedicated line". Claim 17 discloses communication between the base station and the controller over an undedicated public network (the Internet, as recited in the applicants' specification, page 8, lines 21-22). Therefore Scheinert clearly reads on the applicants' limitation because it discloses the IBS 42 communicating with the IBSC 48 over the Internet 47 (see fig. 5, col. 4, lines 55-63, col. 5, lines 4-15). The examiner also maintains that the iBS 42 reads on the applicants' claimed limitation of a base station as recited in the claim because it performs the same function of the base disclosed in the claim 17, which is the communication between the base station and controller over an undedicated public network. Therefore the iBS 42 is equivalent to the applicants' base station

as recited in claim 17. The 35 U.S.C. 102(e) rejections of claims 17-19 are maintained and repeated below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 22 recites the limitation ""the transceiver" in 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by **Scheinert et al 7,117,015**.

Regarding **claim 17**, Scheinert discloses a tangible medium having a software program for use in a wireless communications system, the software program comprising: at least one routine for facilitating communication of

information over an undedicated public network (Internet, see figs. 4 and 5, col. 5, lines 4-7) between at least one base station (IBS 42, see figs. 4 and 5, col. 5, lines 4-7), which is adapted to communicate over an air interface (see col. 5, lines 49-52, col. 6, lines 54-54-67) with portable communications devices (handset 24, see figs. 4 and 5, col. 5, lines 4-7, 16-17 and lines 49-57), and a controller (Internet base station controller 48, see figs. 4 and 5, col. 4, lines 55-63, col. 5, lines 4-7), which is adapted to process information communicated with the at least one base station (IBSC 48 receiving information from IBS 42 over the IP network and managing the IBS 42, see col. 4, lines 55-63, col. 5, lines 4-15), wherein the controller is located between the base station and a service network (see figs. 4 and 5, col. 4, lines 29-38 and lines 59-64).

Regarding **claim 18** as applied to claim 17, Scheinert further discloses wherein the at least one routine facilitates communication information over the internet (IBS 42 with a communication interface for communicating with IBSC 48 via Internet 47, see figs. 4 and 5, col. 4, lines 55-63, col. 5, lines 4-7).

Regarding **claim 19** as applied to claim 17, Scheinert further discloses wherein the at least one routine comprises at least one protocol layer adapted to facilitate communication over the public network (IBS 42 with a communication interface for communicating with IBSC 48 via Internet 47, indicating at least a protocol layer in the IBS 42 for communication via the Internet links with the IBSC 48, see figs. 4 and 5, col. 4, lines 55-63, col. 5, lines 4-7).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-5, 8-12, 15, 20-22, 24 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over **Scheinert et al 7,117,015** (hereinafter Scheinert) in view of **Hameleers et al 6,760,325** (**hereinafter Hameleers**).

Regarding **claim 1**, Scheinert discloses a base station (IBS 42, see figs. 4 and 5, col. 5, lines 4-7) for use with a wireless communications system (see figs. 4 and 5, col. 5, lines 11-15, col. 6, lines 54-57), the base station comprising: an antenna (see figs. 4 and 5, col. 5, lines 16-17 and lines 49-57) configured to receive a wireless transmission from a mobile device (handset 24, see figs. 4 and 5, col. 5, lines 16-17 and lines 49-57); and a communication interface, coupled to

the antenna, and configured to facilitate communication between the base station and an access network unit (Internet base station controller 48, see figs. 4 and 5, col. 4, lines 55-63, col. 5, lines 4-7) over an undedicated public network (IBS 42 is connected via internet links to IBSC 48, indicating presence of an interface in the IBS 42, that is attached to the antenna of the IBS 42 and transmits data/information received by the antenna to the IBSC 48, see col. 4, lines 55-63, col. 5, lines 4-7, col. 9, lines 28-32).

Scheinert does not specifically disclose wherein the communication between the base station and the access network unit is independent of a dedicated connection.

In an analogous art, Hameleers discloses a base station for use with a wireless communication system (BTS 7 or 8, in a GSM network, see fig. 1, col. 3, lines 8-11, 55-56), the base station comprising an antenna for receiving wireless transmission from a mobile device (BTS 7 or 8 is connected to a mobile stations 5, see fig. 1, col. 3, lines 55-60); and a communication interface that communicates with a network access unit (BSC 14, see fig. 1, col. 4, lines 5-52), wherein the communication between the base station and access network unit is independent of a dedicated connection (wireless connection between BTS 7 or 8, and BSC 14 constitutes a connection between the base station and access network that is independent of a dedicated connection because there is no dedicated connection between the base stations 7 or 8, and BSC 14, see fig. 1, col. 4, lines 1-8, col. 6, lines 14-17, 28-33).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Hameleers into the system of Scheinert by having the iBS communicated with the IBSC without any dedicated connection for the benefit of supporting a connectionless service between the base station and access network unit.

Regarding **claim 20**, Scheinert discloses a method of producing an information packet in a wireless communications system (see figs. 4 and 5, col. 5, lines 11-15, col. 6, lines 54-57), the method comprising the acts of: receiving information at a base station (IBS 42, see figs. 4 and 5, col. 5, lines 4-7) from a transceiver unit (mobile station(s) 24, see col. 5, lines 61-17) via an air interface (communication between the mobile station 24 and IBS 42, see col. 5, lines 16-19); processing the information at the base station to form an information packet suitable for transmission to an access network unit (IBS 42 transmits information/data received from handset 24 to Internet base station controller 48, indicating that the IBS 42 has a functionality to process data so that it can be properly transmitted to IBSC 48, see figs. 4 and 5, col. 4, lines 55-63, col. 5, lines 4-7, col. 9, lines 28-40) via an undedicated public network (Internet, see figs. 4 and 5, col. 5, lines 4-7).

Scheinert does not specifically disclose transmitting the information packet from the base station to the access network unit independent of a dedicated connection.

In an analogous art, Hameleers discloses a base station for use with a wireless communication system (BTS 7 or 8, in a GSM network, see fig. 1,

col. 3, lines 8-11, 55-56), the base station comprising an antenna for receiving wireless transmission from a mobile device (BTS 7 or 8 is connected to a mobile stations 5, see fig. 1, col. 3, lines 55-60); and a communication interface that communicates with a network access unit (BSC 14, see fig. 1, col. 4, lines 5-52), wherein the communication between the base station and access network unit is independent of a dedicated connection (wireless connection between BTS 7 or 8, and BSC 14 constitutes a connection between the base station and access network that is independent of a dedicated connection because there is no dedicated connection between the base stations 7 or 8, and BSC 14, see fig. 1, col. 4, lines 1-8, col. 6, lines 14-17, 28-33).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Hameleers into the system of Scheinert by having the iBS communicated with the IBSC without any dedicated connection for the benefit of supporting a connectionless service between the base station and access network unit.

Regarding **claim 2** as applied to claim 1, Scheinert further discloses wherein the communication interface comprises at least one protocol layer (IBS 42 with a communication interface for communicating with IBSC 48 via Internet 47, indicating at least a protocol layer in the IBS 42 for communication via the Internet links with the IBSC 48, see figs. 4 and 5, col. 4, lines 55-63, col. 5, lines 4-7).

Regarding **claim 3**, as applied to claim 2, Scheinert further discloses wherein the at least one protocol layer maintains an IP address of the access

network (IBS 42 with a communication interface for communicating with IBSC 48 via Internet 47, using an IP address, indicating at least a protocol layer in the IBS 42 that uses an IP address for communication via the Internet links with the IBSC 48, see figs. 4 and 5, col. 4, lines 55-63, col. 5, lines 4-7, col. 8, lines 16-20).

Regarding **claim 4** as applied to claim 2, Scheinert further discloses wherein the at least one protocol layer converts information received from the access network unit over the public network to RF signals to be communicated by the base station over an air interface (IBS 42 is connected via internet links to IBSC 48, indicating presence of an interface in the IBS 42, that is attached to the antenna of the IBS 42 and transmits and receives data/information from the IBSC 48, indicating that the IBS 42 is able to format signals received from the IBSC 48 to the RF signals transmitted to the handset 24 over the air interface, see col. 4, lines 55-65, col. 5, lines 4-7, col. 9, lines 28-40).

Regarding **claim 5** as applied to claim 2, Scheinert further discloses wherein at least one protocol layer converts RF signals received by the base station over an air interface to information suitable for transmission over the public network to the access network controller (IBS 42 is connected via internet links to IBSC 48, indicating presence of an interface in the IBS 42, that is attached to the antenna of the IBS 42 and transmits data/information received by the antenna to the IBSC 48, indicating that the IBS 42 is able to format the RF signal received from the handset 24 for transmission over the Internet links 47 to the IBSC 48, see col. 4, lines 55-65, col. 5, lines 4-7, col. 9, lines 28-40).

Regarding **claim 8** as applied to claim 2, Scheinert further discloses wherein the at least one protocol layer encapsulates higher protocol layer information to facilitate protocol requirements over the public network (IBS 42 with a communication interface for communicating with IBSC 48 via Internet 47, using an IP address, indicating at least a protocol layer in the IBS 42 that encapsulates an IP data for transmission of data across the Internet links to the IBSC 48 and vice versa, see figs. 4 and 5, col. 4, lines 55-63, col. 5, lines 4-7, col. 8, lines 16-20).

Regarding **claim 9** as applied to claim 2, Scheinert further discloses wherein at least one protocol layer comprises at least on technology dependent protocol layer (see col. 5, lines 4-15, col. 6, lines 54-67).

Regarding **claim 10** as applied to claim 1, Scheinert further discloses wherein the public network comprises the internet (Internet, see figs. 4 and 5, col. 5, lines 4-7).

Regarding **claim 11** as applied to claim 1, Scheinert further discloses wherein the base station comprises at least one antenna (see figs. 4 and 5, col. 5, lines 16-17 and lines 49-57) to facilitate communications between the base station and at least one portable communications device over an air interface (see figs. 4 and 5, col. 5, lines 4-7, 16-17 and lines 49-57).

Regarding **claim 12** as applied to claim 11, Scheinert further discloses wherein the base station comprises a structure on which the at least one antenna resides (see figs. 4 and 5, col. 5, lines 4-7, 16-17 and lines 49-57).

Regarding **claim 15** as applied to claim 1, Scheinert further discloses wherein base station comprises a structure for housing the communication interface (IBS 42 is connected via internet links to IBSC 48, indicating presence of an interface in the IBS 42 structure, that is attached to the antenna of the IBS 42 and transmits data/information received by the antenna to the IBSC 48, see col. 4, lines 55-63, col. 5, lines 4-7, col. 9, lines 28-32).

Regarding **claim 21**, as applied to claim 20, Scheinert further discloses wherein the public network comprises the Internet (Internet, see figs. 4 and 5, col. 5, lines 4-7).

Regarding **claim 22** as applied to claim 1, Scheinert further discloses the base station, wherein the transceiver is assigned an IP address to facilitate communications with the access network unit over the undedicated public network (IBS 42 with a communication interface for communicating with IBSC 48 via Internet 47, using an IP address, indicating at least a protocol layer in the IBS 42 that uses an IP address for communication via the Internet links with the IBSC 48, see figs. 4 and 5, col. 4, lines 55-63, col. 5, lines 4-7, col. 8, lines 16-20).

Regarding **claim 24**, as applied to claim 20, Scheinert further discloses wherein transmitting the information packet from the base station to the access network unit comprises transmitting the information packet to a base station controller (IBSC 48 receiving information from IBS 42 over the IP network, see col. 4, lines 55-63, col. 5, lines 4-15).

Regarding **claim 25** Scheinert further discloses wherein transmitting the information packet from the base station comprises transmitting the information

packet using one or more Tu-Txrs protocol layers (IBS 42 with a communication interface for communicating with IBSC 48 via Internet 47, using an IP address, indicating at least a protocol layer in the IBS 42 for communication via the Internet links with the IBSC 48, see figs. 4 and 5, col. 4, lines 55-63, col. 5, lines 4-7, col. 8, lines 16-20).

7. Claims 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Scheinert et al 7,117,015** (hereinafter Scheinert) in view of **Hameleers et al 6,760,325** (**hereinafter Hameleers**) as applied to claims 1, 11 and 12, and further in view of **Searle et al 5,603,089** (**hereinafter Searle**).

Regarding **claim 13** as applied to claim 12, Scheinert as modified by Hameleers disclose the claimed limitation of the base station, except wherein the structure comprises a tower.

In the same field of endeavor, Searle discloses a base station with an antenna that resides on a tower structure (base station antenna arrangement in mast tower, see fig. 3, col. 3, lines 18-20).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching Searle into the system of Scheinert as modified by Hameleers by having the antenna components of the base station reside in a mast tower for the benefit of providing support for the antenna and other electronic components of the antenna.

Regarding **claim 14** as applied to claim 12, Scheinert as modified by Hameleers disclose the claimed limitation of the base station, except wherein the structure comprises a building.

In the same field of endeavor, Searle discloses a base station with an antenna that resides in building (base station antenna arrangement in a building, see fig. 3, col. 3, lines 18-20).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching Searle into the system of Scheinert as modified by Hameleers by having the antenna components of the base station reside in a building for the benefit of providing support for the antenna and other electronic components of the antenna and shielding the antenna electronics from outside environmental conditions.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Scheinert et al 7,117,015** (hereinafter Scheinert) in view of **Hameleers et al 6,760,325** (**hereinafter Hameleers**) as applied to claims 1 and 15 above, and further in view of **Ketonen (6,104,917)**.

Regarding **claim 16** as applied to claim 15, Scheinert as modified by Hameleers disclose the claimed limitation except wherein the structure comprises a cabinet.

Ketonen however discloses wherein the structure comprises a cabinet (base station transceiver circuitry are housed within a cabinet, see col. 3, lines 13-15).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Ketonen into the system of Scheinert as modified by Hameleers by including wherein the

structure comprises a cabinet for the benefit of providing housing for the base station radio components.

9. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Scheinert et al 7,117,015** (hereinafter Scheinert) in view of **Hameleers et al 6,760,325** (**hereinafter Hameleers**) as applied to claim 2 above, and further in view of **Kowalski et al (6,631,410)**.

Regarding **claim 6** as applied to claim 2, Scheinert as modified by Hameleers discloses the claimed limitation except wherein the at least one protocol layer provides security information to the network access unit to facilitate secure communication over the public network.

In the same field of endeavor, Kowalski et al teaches wherein the at least one protocol layer (a protocol that employs the MAC layer, see col. 5, lines 41-45) provides security information the network access unit (see col. 5, lines 5-15) to facilitate secure communication over the public network (security, see col. 5, lines 41-45).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Kowalski et al into the system of Scheinert as modified by Hameleers for the benefit of providing secure communications in a wireless network.

Regarding **claim 7** as applied to claim 2, Scheinert as modified by Hameleers discloses the claimed limitation except wherein the at least one protocol layer negotiates quality of service for communications with the access network over the public network.

In the same field of endeavor Kowalski discloses wherein the at least one protocol layer (a protocol that employs the MAC layer, see col. 5, lines 41-45) negotiates quality of service for communications (QoS, see col. 5, lines 41-45) with the access network unit (see col. 5, lines 5-15) over the public network (see col. 5, lines 5-15, 41-45).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Kowalski et al into the system of Scheinert as modified by Hameleers for the benefit providing reliable communications to small office/home networks.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Joo et al 7,016,331 discloses a method of handoff control in an enterprise code division multiple access wireless system.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUMIDE T. AJIBADE AKONAI whose telephone number is (571)272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OA

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617